



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/029,221B
Source: 31PE
Date Processed by STIC: 11/6/02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name,
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two,
2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office,
Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202



Does Not Comply
Corrected Diskette Needed

OIKE

Error on p. 3

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/029,221B

DATE: 11/06/2002
TIME: 14:55:15

Input Set : A:\112766-199.ST25.txt
Output Set: N:\CRF4\11062002\J029221B.raw

```

3 <110> APPLICANT: Short, Jay M.
4     Djavakhishvili, Tsotne David
5     Frey, Gerhard Johann
7 <120> TITLE OF INVENTION: Exonuclease-Mediated Nucleic Acid Reassembly in Directed
Evolution
9 <130> FILE REFERENCE: 112766.199
11 <140> CURRENT APPLICATION NUMBER: US 10/029,221B
C--> 12 <141> CURRENT FILING DATE: 2002-10-23
14 <150> PRIOR APPLICATION NUMBER: US 60/008,311
15 <151> PRIOR FILING DATE: 1995-12-07
17 <150> PRIOR APPLICATION NUMBER: US 60/008,316
18 <151> PRIOR FILING DATE: 1995-12-07
20 <160> NUMBER OF SEQ ID NOS: 12
22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 30
26 <212> TYPE: DNA
27 <213> ORGANISM: Artificial Sequence
29 <220> FEATURE:
30 <223> OTHER INFORMATION: defined-sequence-kernel
W--> 32 <221> NAME/KEY: misc_feature
33 <222> LOCATION: 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 22, 23,
34     25, 26, 28, 29
35 <223> OTHER INFORMATION: n = A,T,C or G
W--> 37 <400> 1
W--> 38 nnknnknnkn nknknknkn knknknknkn 30
40 <210> SEQ ID NO: 2
41 <211> LENGTH: 30
42 <212> TYPE: DNA
43 <213> ORGANISM: Artificial Sequence
45 <220> FEATURE:
46 <223> OTHER INFORMATION: defined sequence kernel
W--> 48 <221> NAME/KEY: misc_feature
49 <222> LOCATION: 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 22, 23,
50     25, 26, 28, 29
51 <223> OTHER INFORMATION: n = A,T,C or G
W--> 53 <400> 2
W--> 54 nnnnnnnnnn nnnnnnnnnn mnnnnnnnnn 30
56 <210> SEQ ID NO: 3
57 <211> LENGTH: 5
58 <212> TYPE: PRT
59 <213> ORGANISM: Artificial Sequence
61 <220> FEATURE:
62 <223> OTHER INFORMATION: spacer peptide sequence of any number

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RAW SEQUENCE LISTING

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64 <400> SEQUENCE: 3
65 Gly Gly Gly Gly Ser
66 1 5
69 <210> SEQ ID NO: 4
70 <211> LENGTH: 15
71 <212> TYPE: PRT
72 <213> ORGANISM: Artificial Sequence
74 <220> FEATURE:
75 <223> OTHER INFORMATION: linker peptide sequence
77 <400> SEQUENCE: 4
78 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
79 1 5 10 15
82 <210> SEQ ID NO: 5
83 <211> LENGTH: 10
84 <212> TYPE: DNA
85 <213> ORGANISM: Artificial Sequence
87 <220> FEATURE:
88 <223> OTHER INFORMATION: primer
90 <400> SEQUENCE: 5
91 aaggaggag 10
93 <210> SEQ ID NO: 6
94 <211> LENGTH: 24
95 <212> TYPE: DNA
96 <213> ORGANISM: Artificial Sequence
98 <220> FEATURE:
99 <223> OTHER INFORMATION: forward primer
W--> 101 <221> NAME/KEY: misc_feature
102 <222> LOCATION: 24
103 <223> OTHER INFORMATION: n = A,T,C or G from 10 to 100
W--> 105 <400> 6
W--> 106 ctagaagaga ggagaaaacc atgn 24
108 <210> SEQ ID NO: 7
109 <211> LENGTH: 22
110 <212> TYPE: DNA
111 <213> ORGANISM: Artificial Sequence
113 <220> FEATURE:
114 <223> OTHER INFORMATION: reverse primer
W--> 116 <221> NAME/KEY: misc_feature
117 <222> LOCATION: 22
118 <223> OTHER INFORMATION: n = A,T,C or G from 10 to 100
W--> 120 <400> 7
W--> 121 gatcaaaggc gcgcctgcag gn 22
123 <210> SEQ ID NO: 8
124 <211> LENGTH: 23
125 <212> TYPE: DNA
126 <213> ORGANISM: Artificial Sequence
128 <220> FEATURE:
129 <223> OTHER INFORMATION: forward primer
131 <400> SEQUENCE: 8

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RAW SEQUENCE LISTING

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Input Set : A:\112766-199.ST25.txt

Output Set: N:\CRF4\11062002\J029221B.raw

132 ctagaaggga ggagaaaacc atg 23
 134 <210> SEQ ID NO: 9
 135 <211> LENGTH: 21
 136 <212> TYPE: DNA
 137 <213> ORGANISM: Artificial Sequence
 139 <220> FEATURE:
 140 <223> OTHER INFORMATION: reverse primer
 142 <400> SEQUENCE: 9
 143 gatcaaaggc gcgcctgcag g 21
 145 <210> SEQ ID NO: 10
 146 <211> LENGTH: 43
 147 <212> TYPE: PRT
 148 <213> ORGANISM: Artificial Sequence
 150 <220> FEATURE:
 151 <223> OTHER INFORMATION: primer
 W--> 153 <221> NAME/KEY: VARIANT *also Xaa found at position 23*
 154 <222> LOCATION: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16,
 155 17, 18, 19, 20, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33,
 156 34, 35, 36, 37, 38, 39, 40, 41, 42, 43
 157 <223> OTHER INFORMATION: Xaa = Any Amino Acid
 W--> 159 <221> VARIANT
 160 <222> LOCATION: 23
 161 <223> OTHER INFORMATION: Xaa = Gly or Thr
 W--> 163 <400> 10
 W--> 164 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 165 1 5 10 15
 W--> 166 Xaa Xaa Xaa Xaa Asn Asn Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 167 20 25 30
 W--> 168 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 169 35 40
 172 <210> SEQ ID NO: 11
 173 <211> LENGTH: 39
 174 <212> TYPE: DNA
 175 <213> ORGANISM: Artificial Sequence
 177 <220> FEATURE:
 178 <223> OTHER INFORMATION: forward primer
 180 <400> SEQUENCE: 11
 181 ctagaaggga ggagaattac atgaagcggc ttttagccc 39
 183 <210> SEQ ID NO: 12
 184 <211> LENGTH: 27
 185 <212> TYPE: DNA
 186 <213> ORGANISM: Artificial Sequence
 188 <220> FEATURE:
 189 <223> OTHER INFORMATION: reverse primer
 191 <400> SEQUENCE: 12
 192 agctaagggt caaggccgca cccgagg 27

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/029,221B

DATE: 11/06/2002
TIME: 14:55:16

Input Set : A:\112766-199.ST25.txt
Output Set: N:\CRF4\11062002\J029221B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 1,2,4,5,7,8,10,11,13,14,16,17,19,20,22,23,25,26,28,29

Seq#:2; N Pos. 1,2,4,5,7,8,10,11,13,14,16,17,19,20,22,23,25,26,28,29

Seq#:6; N Pos. 24

Seq#:7; N Pos. 22

Seq#:10; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,23,24

Seq#:10; Xaa Pos. 25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/029,221B

DATE: 11/06/2002

TIME: 14:55:16

Input Set : A:\112766-199.ST25.txt

Output Set: N:\CRF4\11062002\J029221B.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:32 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:37 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1
L:38 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:48 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:53 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2
L:54 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:101 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:105 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6
L:106 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:116 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:120 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7
L:121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:153 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:159 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10
L:163 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10
L:164 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:166 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:16
L:168 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:32